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**TRANSMITTAL  
FORM**

(to be used for all correspondence after initial filing)

<b>TRANSMITTAL FORM</b>  (to be used for all correspondence after initial filing)	Application Number	10/752,134-Conf. #3921	
	Filing Date	January 6, 2004	
	First Named Inventor	Abbas A. Alahyari	
	Art Unit	3744	
	Examiner Name	W. E. Tapolcai	
Total Number of Pages in This Submission	18	Attorney Docket Number	1213_018

**ENCLOSURES (Check all that apply)**

<input checked="" type="checkbox"/> Fee Transmittal Form  <input type="checkbox"/> Fee Attached  <input type="checkbox"/> Amendment/Reply  <input type="checkbox"/> After Final  <input type="checkbox"/> Affidavits/declaration(s)  <input type="checkbox"/> Extension of Time Request  <input type="checkbox"/> Express Abandonment Request  <input type="checkbox"/> Information Disclosure Statement  <input type="checkbox"/> Certified Copy of Priority Document(s)  <input type="checkbox"/> Reply to Missing Parts/ Incomplete Application  <input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Drawing(s)  <input type="checkbox"/> Licensing-related Papers  <input type="checkbox"/> Petition  <input type="checkbox"/> Petition to Convert to a Provisional Application  <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address  <input type="checkbox"/> Terminal Disclaimer  <input type="checkbox"/> Request for Refund  <input type="checkbox"/> CD, Number of CD(s) _____  <input type="checkbox"/> Landscape Table on CD	<input type="checkbox"/> After Allowance Communication to TC  <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences  <input checked="" type="checkbox"/> Appeal Communication to TC (Appeal Notice, Brief, Reply Brief)  <input type="checkbox"/> Proprietary Information  <input type="checkbox"/> Status Letter  <input checked="" type="checkbox"/> Other Enclosure(s) (please Identify below):  Return Mailroom Postcard
<b>Remarks</b>		

**SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT**

Firm Name	MARJAMA MULDOON BLASIAK & SULLIVAN LLP		
Signature			
Printed name	William W. Habelt		
Date	October 11, 2007	Reg. No.	29,162

**Transmittal**

I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EM154107507US, on the date shown below in an envelope addressed to:  
MS Appeal Brief - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Dated: October 11, 2007

Signature

  
Christine M. Holmes



<b>Effective on 12/08/2004.</b> <b>Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).</b>		<b>Complete if Known</b>	
<b>FEE TRANSMITTAL</b> <b>For FY 2008</b>		Application Number	10/752,134-Conf. #3921
		Filing Date	January 6, 2004
		First Named Inventor	Abbas A. Alahyari
		Examiner Name	W. E. Tapolcai
		Art Unit	3744
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27		Attorney Docket No.	1213_018
<b>TOTAL AMOUNT OF PAYMENT</b>		<b>(\$)</b>	<b>510.00</b>

<b>METHOD OF PAYMENT (check all that apply)</b>			
<input type="checkbox"/> Check	<input type="checkbox"/> Credit Card	<input type="checkbox"/> Money Order	<input type="checkbox"/> None
<input type="checkbox"/> Other (please identify): _____			
<input checked="" type="checkbox"/> Deposit Account	Deposit Account Number: <b>03-0835</b>		Deposit Account Name: <b>Carrier Corporation</b>
For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)			
<input checked="" type="checkbox"/> Charge fee(s) indicated below		<input type="checkbox"/> Charge fee(s) indicated below, <b>except for the filing fee</b>	
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<b>FEE CALCULATION</b>							
<b>1. BASIC FILING, SEARCH, AND EXAMINATION FEES</b>							
	<b>FILING FEES</b>		<b>SEARCH FEES</b>		<b>EXAMINATION FEES</b>		
		<b>Small Entity</b>		<b>Small Entity</b>		<b>Small Entity</b>	
<b>Application Type</b>	<b>Fee (\$)</b>	<b>Fee (\$)</b>	<b>Fee (\$)</b>	<b>Fee (\$)</b>	<b>Fee (\$)</b>	<b>Fee (\$)</b>	<b>Fees Paid (\$)</b>
Utility	310	155	510	255	210	105	
Design	210	105	100	50	130	65	
Plant	210	105	310	155	160	80	
Reissue	310	155	510	255	620	310	
Provisional	210	105	0	0	0	0	
<b>2. EXCESS CLAIM FEES</b>							
<b>Fee Description</b>						<b>Fee (\$)</b>	<b>Small Entity Fee (\$)</b>
Each claim over 20 (including Reissues)						50	25
Each independent claim over 3 (including Reissues)						210	105
Multiple dependent claims						370	185
<b>Total Claims</b>		<b>Extra Claims</b>	<b>Fee (\$)</b>	<b>Fee Paid (\$)</b>	<b>Multiple Dependent Claims</b>		
- 20 =		x	=		<b>Fee (\$)</b>		<b>Fee Paid (\$)</b>
HP = highest number of total claims paid for, if greater than 20.							
<b>Indep. Claims</b>		<b>Extra Claims</b>	<b>Fee (\$)</b>	<b>Fee Paid (\$)</b>			
- 3 =		x	=				
HP = highest number of independent claims paid for, if greater than 3.							
<b>3. APPLICATION SIZE FEE</b>							
If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$260 (\$130 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).							
<b>Total Sheets</b>		<b>Extra Sheets</b>	<b>Number of each additional 50 or fraction thereof</b>		<b>Fee (\$)</b>	<b>Fee Paid (\$)</b>	
- 100 =		/ 50 =	(round up to a whole number) x		=		
<b>4. OTHER FEE(S)</b>							
Non-English Specification, \$130 fee (no small entity discount)						<b>Fees Paid (\$)</b>	
Other (e.g., late filing surcharge): 1402 Filing a brief in support of an appeal						510.00	

<b>SUBMITTED BY</b>			
Signature		Registration No. (Attorney/Agent)	29,162
Name (Print/Type)	William W. Habelt	Telephone	(315) 425-9000
		Date	October 11, 2007

<b>Fee Transmittal</b>	
I hereby certify that this paper (along with any paper referred to as being attached or enclosed) is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EM154107507US, on the date shown below in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.	
Dated: October 11, 2007	Signature: Christine M. Holmes



Attorney Docket No.: 1213\_018

PATENT

UNITED STATES PATENT AND TRADEMARK OFFICE  
BOARD OF PATENT APPEALS AND INTERFERENCES

Inventor(s): Abbas A. Alahyari et al. Confirm. No.: 3921  
Serial No.: 10/752,134 Art Unit: 3744  
Filed: January 6, 2004 Examiner: Tapolcai, William E.  
Customer: 20874  
Title: **REFRIGERATED DISPLAY MERCHANDISER WITH  
IMPROVED AIR CURTAIN**

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

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*Christine M. Holmes*  
Christine M. Holmes

**BRIEF ON APPEAL**

Sir:

This Brief supports the appeal to the Board of Patent Appeals and Interferences from the final rejection dated May 14, 2007 in the application listed above. Appellant filed the Notice of Appeal on August 13, 2007, and now submits this Brief pursuant to 35 U.S.C. § 134 and 37 C.F.R. §§ 1.191 and 41.31 et seq.

The Commissioner is hereby authorized to charge any fee that may be required with respect to the filing of this Appeal Brief to Deposit Account No. 03-0835.

The Commissioner is hereby authorized to charge any additional fees associated with this Appeal or credit any overpayment to Deposit Account No. 03-0835.

10/12/2007 EAYALEW1 00000086 030835 10752134

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**I. REAL PARTY IN INTEREST**

The real party in interest is Carrier Commercial Refrigeration, Inc., the Assignee of the subject invention by an assignment from the inventors that is recorded in the United States Patent and Trademark Office at Reel 015308, Frames 0917 through 0922.

**II. RELATED APPEALS AND INTERFERENCES**

Appellant is unaware of any other prior and pending appeals, interferences or judicial proceedings which may be related to, directly affect, or be directly affected by or have a bearing on the Board's decision in the pending Appeal.

**III. STATUS OF CLAIMS**

Claims 1-4 are pending in the application under appeal.

Claim 1 stands as finally rejected and appealed.

Claim 2 stands as finally rejected and appealed.

Claim 3 stands as finally rejected and appealed.

Claim 4 stands as finally rejected and appealed.

**IV. STATUS OF AMENDMENTS**

No Amendments were filed subsequent to final rejection.



**V. SUMMARY OF CLAIMED SUBJECT MATTER**

The subject matter defined in independent claim 1, the sole independent claim pending in the application under appeal, is a refrigerated merchandiser (page 4, paragraph [008], lines 1-4, Fig. 1) including a display case (page 4, paragraph [008], lines 1-4; paragraph [010], lines 1-6, Fig. 1, reference 12) defining a product display region (page 4, paragraph [010], lines 2-3; page 5, paragraph [011], lines 1-8, Fig. 1, reference 30) having an open-front viewing area (page 5, paragraph [011], lines 3-5, Fig. 1, reference 25), a first air outlet (page 6, paragraph [013], lines 3-8; page 7, paragraph [015], lines 1-6, Fig. 1, reference 34) associated with said display case for directing a first air stream (page 7, paragraph [015], lines 4-6, Fig. 1, reference 45) generally downwardly across the front viewing area along a first path, and a second air outlet (page 6, paragraph [014], lines 1-4; page 7, paragraph [015], lines 1-3 and 6-9, Fig. 1, reference 70) associated with said display case for directing a second air stream (page 7, paragraph [015], lines 6-9, Fig. 1, reference 65) generally downwardly across the front viewing area along a second path outwardly of the first air stream. The refrigerated merchandiser is characterized in that the first air stream exits the first air outlet at a first discharge velocity (page 7, paragraph [016], lines 1-7) and the second air stream exits the second air outlet at a second discharge velocity (page 7, paragraph [016], lines 1-7), said second discharge velocity being at least 1.4 times greater than said first discharge velocity (page 7, paragraph [016], lines 1-2).

**VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

1. Whether claims 1-4 are anticipated under 35 U.S.C. 102(b) by U.S. Patent No. 5,357,767 to Roberts.

**VII. ARGUMENT**

**1. Rejection under 35 U.S.C. 102(b) over U.S. Patent No. 5,357,767 to Roberts.**

**A. Claims 1-4**

Roberts, U.S. Patent 5,357,767 discloses a refrigerated merchandiser having a cabinet with an open front product display area shielded by an innermost primary air curtain, an outermost tertiary air curtain, and a secondary air curtain disposed therebetween (see Fig. 2 of Roberts). At column 9, lines 61-65, Roberts specify teaches that the first primary air curtain PC, i.e. the innermost air curtain, is discharged at a reverse taper or air speed gradient from a discharge velocity of about 200 fpm at its back face, i.e. the face of the primary air curtain bordering the open front of the display area, to a discharge velocity of about 250 fpm at its front face. At column 10, lines 5-11, Roberts teaches that the secondary air curtain SC, i.e. the middle air stream, is discharged at a reverse taper or air speed gradient from a discharge velocity of about 250 fpm at its rear face, i.e. the face of the secondary air curtain bordering on the primary air curtain, and a discharge velocity of about 300 fpm at its front face. At column 10, lines 11-13, Roberts specifically teaches that the tertiary air curtain, i.e. the outermost air curtain, has a box profile of about 300 fpm across the span between its inner face, i.e. the face of the tertiary air curtain bordering the secondary air curtain, and its outer face. Further, Roberts states at column 10, lines 13-15: "Thus, the air speeds at the interface of the adjacent curtains will be about the same to reduce intermixing and turbulence."

However, the Examiner cites Roberts as disclosing that the primary air PC can have a velocity *in the range* of 200-250 fpm (referring to column 9, lines 60-65), that the secondary air curtain SC can have a velocity *in the range* of 250-300 fpm (referring to column 10, lines 8-11), and that the third air curtain TC is disclosed as having a velocity of about 300 fpm (citing column 10, lines 12-13). Based on this reading of Roberts, the Examiner reasons that if the primary air curtain PC has a velocity of 200 fpm and the secondary air curtain SC has a velocity of 280 fpm, the ratio of those two velocities is 1.4. Similarly, the Examiner reasons that if the primary air curtain has a velocity of 214 fpm and the third air curtain has a velocity of 300 fpm, the ratio of those velocities is again 1.4. Based on this reasoning, the Examiner concludes Roberts fully anticipates claim 1 under 35 U.S.C. 102(b).

Appellants respectfully disagree with the Examiner's reading of Roberts. Appellants respectfully submit that Roberts specifically teaches discharging both the primary air curtain and the secondary air curtain at a reverse velocity taper from back to front across both the respective air curtains so as to maintain the air speeds of the air curtains "about the same" at their respective interfaces. Ergo, the discharge velocity of the first air curtain is not a selected uniform value within the range of about 200 fpm to about 250 fpm, but rather tapers from about 250 fpm at its outer face down to about 200 fpm at its inner face. Similarly, the discharge velocity of the secondary, i.e. middle, air curtain SC is about 250 fpm at interface with the inner primary air curtain PC and is about 300 fpm at interface with the tertiary, i.e. outer, air curtain TC which has a uniform discharge velocity

of about 300 fpm.

Accordingly, Roberts teaches forming each of the primary and secondary air curtains of a continuum of discrete air streams having different discharge velocities. Applicants respectfully submit the Roberts can not be read as proffered by the Examiner to teach one skilled in the art to pick at random a particular discharge velocity for an inner air curtain in the range of 200 to 250 fpm, or a particular discharge velocity for the middle air curtain in the range of 250 to 300 fpm that would result in a discharge velocity for the secondary air curtain at least about 1.4 times greater than the discharge velocity of the primary air curtain. Similarly, Applicants respectfully submit the Roberts can not be read as proffered by the Examiner to teach one skilled in the art to pick at random a particular discharge velocity for an inner air curtain in the range of 200 to 250 fpm that would result in a discharge velocity for the tertiary air curtain at least about 1.4 times greater than the discharge velocity of the primary air curtain.

Appellants respectfully submit that there is no motivation in Roberts that would lead one skilled in the art to ignore the specific teaching of Roberts of an air speed gradient across the inner primary air curtain PC and of an air speed gradient across the middle secondary air curtain SC and to further ignore the teaching in Roberts of the desire to ensure that the air speeds at the interface of the adjacent curtains will be about the same. Appellants respectfully submit that simply randomly selecting discharge velocities in the range of the respective velocity gradients taught in Roberts to yield the discharge velocity relations taught by Appellant and recited in claim 1 of the application under appeal, while

ignoring the specific teaching of Roberts of maintaining about equal air speeds at the interfaces of adjacent air curtains constitutes improper hindsight reconstruction of the claimed invention in view of Applicants' own teachings.

Accordingly, Appellants respectfully submit that Roberts can not be read to and does not anticipate Appellants' teaching of a refrigerated merchandiser having a first air curtain having a first discharge velocity and a second air curtain disposed outwardly of the first air curtain and having a second discharge velocity with the second discharge velocity being "at least 1.4 times greater than" the first discharge velocity, as recited in Applicants' claim 1. As noted in the application under appeal at page 8, lines 2-6, maintaining the air curtain velocity ratio within the range of from about 1.4 to about 1.8, minimizes the velocity gradient, and therefor shear instabilities, between the adjacent air curtains along the length of the interface between the adjacent air curtains.

Additionally, Appellants respectfully submit that since Roberts does not anticipate independent claim 1 for the reasons set forth herein, Roberts does not anticipate any of dependent claims 2, 3 and 4, by reason of their dependency from independent claim 1.

**VIII. CONCLUSION**

For the foregoing reasons, Appellants respectfully request reversal of the Examiner's rejection of claims 1-4 under 35 U.S.C. 102(b) as anticipated by Roberts, U.S. Patent 5,357,767.

Respectfully submitted,

Dated: October 11, 2007



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**CLAIMS APPENDIX**

1. A refrigerated merchandiser including a display case defining a product display region having an open-front viewing area, a first air outlet associated with said display case for directing a first air stream generally downwardly across the front viewing area along a first path, and a second air outlet associated with said display case for directing a second air stream generally downwardly across the front viewing area along a second path outwardly of the first air stream; said refrigerated merchandiser characterized in that the first air stream exits the first air outlet at a first discharge velocity and the second air stream exits the second air outlet at a second discharge velocity, said second discharge velocity being at least 1.4 times greater than said first discharge velocity.

2. A refrigerated merchandiser as recited in claim 1 further characterized in that the ratio of said second discharge velocity to said first discharge velocity is in the range from 1.4 to about 1.8.

3. A refrigerated merchandiser as recited in claim 1 wherein the first air stream comprises relatively cooler air and the second air stream comprises relatively warmer air.

4. A refrigerated merchandiser as recited in claim 1 wherein the second air stream comprises ambient air.



**EVIDENCE APPENDIX**

Appellant relies on the prosecution history of the patent application being appealed.

**RELATED PROCEEDINGS APPENDIX**

None.